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ABSTRACT

This report presents a brief review of the development of methods and programs for treatment of drug abusers in the United States. In order to limit the scope of the report, discussion of the treatment of alcohol abuse and alcoholism is excluded. The report focuses primarily on the treatment of opiate dependence, since most of the experience on development of specialized methods has dealt with the problem of opiate dependence. (Author)

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NATIONAL CLEARINGHOUSE FOR DRUG ABUSE INFORMATION

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The National Clearinghouse for Drug Abuse Information recognizes the need for clarifying some of the more complex issues in drug abuse by gathering the significant research findings on each subject and developing fact sheets on the problem. These fact sheets, which are part of the Clearinghouse Report Series, present information about treatment modalities, the pharmacology and chemistry of various drugs of abuse, and opinions and practices of recognized authorities in the field. The Clearinghouse would like to thank the Division of Community Assistance, NIDA, for their review and comments on this publication.

TREATMENT OF DRUG ABUSE: AN OVERVIEW

This report presents a brief review of the development of methods and programs for treatment of drug abusers in the United States. In order to limit the scope of the report, discussion of the treatment of alcohol abuse and alcoholism is excluded. The report focuses primarily on the treatment of opiate dependence, since most of the experience in development of specialized methods has dealt with the problem of opiate dependence.

Historical Background

During the 19th century, treatment for drug abusers was generally handled by private physicians and usually involved simply helping the patient through withdrawal. The widespread medical use of morphine, an alkaloid of opium, for relief of pain during the Civil War resulted in morphine addiction among thousands of soldiers. Many of these "medical addicts" were successfully withdrawn from morphine when it was no longer needed for pain relief, but many others continued compulsive use of the drug. The easy availability of opium in the form of patent medicines resulted in addiction among thousands of other people--many of them rural housewives.

Heroin, a semisynthetic derivative of morphine, was developed in 1898 as a potent pain-killer and cough suppressant which was believed to be nonaddictive. Because heroin relieved morphine withdrawal symptoms, it was advertised as a cure for morphine addiction. Several years passed before medical authorities discovered that heroin was as addictive as morphine.

In the late 1800's most physicians regarded drug addiction as a physical disease which could be cured by gradually reducing use of the drug (withdrawal). The psychological element of addiction was largely ignored and, because there was very little followup on patients after treatment, the significance of the problem of relapse was not recognized. The problem of drug addiction did not become a public health issue until the early years of the 20th century when the public became increasingly aware of the link between narcotics and organized crime, as well as the growing incidence of drug addiction among physicians.

The Harrison Act, passed in 1914, restricted the distribution of opiates and cocaine to registered physicians and dentists for use only in the course of professional practice. After this legislation, physicians were deluged with addicted patients seeking drugs. The Federal Government interpreted the law as prohibiting doctors from prescribing maintenance doses to addicts, and as a result numerous indictments were brought against honest physicians who believed that maintenance was the only useful treatment for dependence, as well as the notorious "script" doctors who indiscriminately prescribed large doses of opiates. After 1919, when legitimate sources of narcotics were no longer available, thousands of addicts, particularly those in the larger cities, turned to the illegal market.

To deal with this new problem the Federal Government encouraged large cities to establish temporary clinics for maintenance of dependent persons on doses of opiates with the idea of gradually reducing the dosage and eventually withdrawing the drug. Of the 44 clinics which were established, some claimed success in gradually withdrawing patients, others merely provided maintenance, and several became notoriously careless in their distribution of opiates. The poor performance of some of the clinics along with the condemnation of outpatient maintenance by the American Medical Association led the Federal Government to withdraw its support. The last of the clinics had closed by 1925.

In the following few years, the emphasis on prohibition appeared to solve part of the problem of drug abuse, particularly the danger of medical dependence which had resulted from prescribed drugs and patent medicines. However, a new pattern of drug abuse had begun to emerge in the larger cities. The declining population of mostly middle-aged medical dependents was beginning to be replaced by a new group of young male users who preferred heroin to morphine. From 1925 to 1935, treatment for drug abusers was virtually nonexistent. By that time the medical community was well aware of the extremely high relapse rate among chronic users, and a mood of discouragement prevailed.

Because the Federal prisons were receiving large numbers of drug addicts, in 1929 Congress authorized the establishment of two drug abuse treatment hospitals, primarily as a means of segregating the opiate-dependents from other prisoners. The first Federal drug abuse treatment clinic opened in Lexington, Kentucky, in 1935, and the second opened in Fort Worth, Texas, three years later. Although the clinics were designed primarily for incarceration of Federal prisoners who were drug addicts, voluntary patients were accepted and they soon made up the majority of patients. The clinics withdrew patients using decreasing doses of morphine, followed by a period of inpatient treatment which was supposed to last several months. Voluntary patients were free to leave whenever they wished, however, and most of them did not stay to complete the full treatment period. Followup studies showed that a substantial majority of those patients relapsed to drug use.

The Federal clinics at Lexington and Fort Worth were the only major drug abuse treatment facilities in the country until 1952, when the State of New York opened Riverside Hospital for juveniles in response to the alarming increase in drug addiction among teenagers in New York City. Treatment involved hospitalization for a period of 18 months or more, followed by a period of outpatient care. Because the hospital had actual custody of the juveniles for up to 3 years, most of the patients completed the full treatment regime. Several years later, however, a study showed that approximately 95 percent of the patients relapsed after treatment, and Riverside was closed in 1963.

The explosion of drug addiction in the urban slums in the 1950's and 1960's led to a search for more effective treatment methods. Synanon, founded in 1959 by a former alcoholic named Charles Dederich, was the first of a line of residential treatment programs called therapeutic communities. These programs emphasized the psychological element of drug addiction and attempted to modify the addict's character through group therapy and reinforcement of good behavior. The communities were not designed to treat large numbers of people at one time, and many who entered the programs dropped out after a short period. However, the novelty of the method and the dramatic success of the few who remained in the communities attracted the attention of the public. The therapeutic community and group therapy were soon recognized as important methods of treatment.

In 1961 and 1962, California and New York established statewide treatment programs for drug addicts. The programs were modeled after Lexington but were expected to be more successful because aftercare was compulsory. Treatment involved withdrawal, psychiatric care, and group therapy, beginning with a period of mandatory hospitalization. After several years, the results of both programs were disappointing. As in the case of Lexington and Riverside, the programs were believed to have very high patient relapse rates.

In 1964, Marie Nyswander and Vincent Dole began an experimental drug maintenance program in New York using methadone, a synthetic opiate substitute. Hospitalized

patients were gradually stabilized on a high daily dose of methadone. After stabilization, the patients were released and required to return to the clinic daily for their methadone dose. They also received individualized counseling and support services. All the patients stayed in the program voluntarily, and most showed dramatic improvements in social functioning, in terms of employment or enrollment in school. Encouraged by this success, Doctors Dole and Nyswander expanded the program and enrolled about 4,000 patients over the next 3 years. In 1967, an independent evaluation of the program showed that 80 percent of the patients had remained in the program and showed significant improvements in social functioning. The Federal Government then permitted the establishment of other experimental methadone maintenance programs. Subsequent experiments showed that initial hospitalization was unnecessary, a factor which greatly reduced the expense of the programs. Methadone programs then proliferated across the country, and by 1972 methadone had become one of the most widely used treatment methods.

At about the same time that methadone experimental programs were beginning in 1965, researchers at Lexington began to experiment with the use of narcotic antagonists--drugs which counteract the effects of opiates without being addictive themselves. The antagonists had already proved to be clinically useful in treating cases of narcotic overdose and in detecting opiate dependent individuals. The main problems with using antagonists in the treatment of addiction proved to be their short duration of action and some unpleasant side effects, which discouraged, rather than encouraged, addicts to continue in treatment.

In 1966, while methadone maintenance was still in the experimental stages, the Narcotic Addict Rehabilitation Act (NARA) (P.L. 89-793) was passed by Congress. Title I of the Act authorized diversion to treatment before conviction for a restricted class of Federal offenders. Title II provided for treatment as a sentencing alternative for a slightly larger class. Title III provided for voluntary and involuntary civil commitment to Federal treatment facilities in localities where no adequate State treatment facilities existed. Title I of NARA has been little used, apparently because of a lack of interest by U.S. District Attorneys and the restrictions on eligibility. Title II has been used to a greater extent but strict eligibility standards also prohibited its widespread use. However, as a result of Title II, the Bureau of Prisons has initiated a number of innovative treatment programs for a wider variety of drug-dependent offenders. Title III served primarily as a mechanism through which the Federal treatment facilities were made available to States and local communities where no adequate facilities existed. In terms of current funding priorities, Title IV was the most important part of the Narcotic Addict Rehabilitation Act. Under Title IV, the Federal Government began to provide financial and technical assistance to States and cities for the development of drug abuse treatment programs. Two other pieces of Federal legislation authorizing additional aid to State and local treatment programs followed during the next 5 years.

The Comprehensive Drug Abuse Prevention and Control Act of 1970 (P.L. 91-513) further expanded community assistance programs to include all types of drug-dependent persons and drug abusers as well as opiate-dependents. In addition to

providing financial support for community-based treatment programs, in recent years the Federal Government has encouraged the development of programs which offer more than one method of treatment, referred to as multi-modality programs. The Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255) provided greatly increased Federal resources to develop community-based, multi-modality treatment centers throughout the United States. The Federal Government has also encouraged treatment programs to judge patient "success" by more flexible standards. In the past, total abstinence from drugs was regarded as the only criterion of success in treatment. Today, however, reduced drug use along with improved social functioning is regarded as a degree of success.

The fact remains that no treatment method yet developed has solved, or promises to solve, all of the complex problems involved in drug abuse. There is still confusion and controversy about the nature of drug dependence and how society should deal with it. It is clear, however, that a variety of methods and approaches must be available to help the various types of drug abusers that exist today. The next section of this report briefly describes the major methods of drug abuse treatment in use at the present time.

Present Methods of Treatment

Hospitalization

Hospitalization was used to treat drug dependents in the 19th century, and the method was continued at the Lexington and Fort Worth clinics established in the 1930's. Treatment began with gradual withdrawal of the drug, by decreasing the dosage over a period of 1 or 2 weeks, until the patient was drug-free. Withdrawal was followed by a period of inpatient care, usually lasting several months, during which the patient remained isolated from his former environment and from drugs, and received psychiatric counseling, psychotherapy, group therapy or work therapy. The third stage of the hospitalization method consisted of a period of outpatient aftercare in which the patient lived in his community but continued to receive counseling, psychotherapy, or vocational rehabilitation.

The California and New York State treatment programs and the Federal NARA program which started in the 1960's used the Lexington model of hospitalization, although they tried to improve it. The precise degree of success or failure of these hospitalization programs is debatable, because followup studies had difficulties with data collection and definition of "success" or "failure" of treatment. Despite the fact that a mental health approach and professional therapy were used, the emphasis on security and isolation of the patients from the community resulted in a prison-like atmosphere in many of the facilities. The term "civil commitment" has often been used to describe the hospitalization method because legal controls have frequently been used to confine patients in hospitals.

Hospitalization is the most expensive method of treatment, and today it is generally believed to be the least effective method, in view of the high relapse rates of most hospitalization programs over the years. For these reasons the Fort Worth clinic has been closed; Lexington is now closed to patients except those participating in research; and the NARA hospitalization programs are presently being phased out.

Methadone Maintenance

In recent years, methadone maintenance has been the most widely used method for treating opiate-dependent persons. Most large cities have treatment programs which provide methadone detoxification and maintenance services after a diagnosis of opiate addiction has been made. Methadone maintenance programs have demonstrated the ability to attract and retain in treatment a large number of opiate-dependent persons. In addition, since most methadone maintenance programs offer treatment on an outpatient basis, it is a markedly less expensive method than treatment which involves hospitalization or confinement.

The methadone maintenance technique developed by Dole and Nyswander used methadone in sufficient dosage to create in patients a "blockade effect." In other words, with the use of this technique, patients became tolerant to the euphoric effects of opiates. For example, if a patient used heroin while receiving daily a large oral dose of methadone, he would not experience the usual euphoria that accompanies heroin usage. In many patients this "blockade effect" tended to discourage repeated illicit opiate usage. During the last ten years, however, many investigators have reported similar successful treatment outcomes for patients using smaller daily doses of methadone. This method has a particular advantage in that the patient is less dependent on opiates. For this reason many maintenance programs today use a lower daily dose of methadone, which is sufficient to prevent withdrawal symptoms, although it does not completely "block" the effects of a sufficiently high dose of heroin.

Federal regulations now require that methadone maintenance programs provide additional treatment such as group therapy, family counseling, vocational training, and social services. Eligibility is limited to persons 16 years of age or older who can demonstrate that they are opiate-dependent and have been for at least two years. Persons between the ages of 16 and 18 must have parental consent and must have tried and failed at least two attempts at detoxification. Although the ultimate goal of methadone maintenance treatment is eventual withdrawal from methadone and elimination of dependence on any drug, for some individuals maintenance may continue for months or years. The general theory behind methadone maintenance is to relieve the craving for heroin while engaging the patient in additional treatment aimed at helping him work out a better way of living.

In addition to maintenance, methadone programs also provide outpatient detoxification. This treatment involves administering decreasing doses of methadone over a period ranging from a few days to a few weeks for the purpose of relieving withdrawal symptoms. Some addicts volunteer for detoxification in an attempt to become

drug-free. However, statistics reveal that detoxification alone is usually unsuccesful. Most patients either relapse to heroin use or enter methadone maintenance programs after detoxification has failed.

Critics of the methadone maintenance method point to the fact that methadone does not cure drug dependence but merely transfers dependence from one drug to another. Another criticism is that some patients begin chronic abuse of other drugs such as alcohol, amphetamines, barbiturates, or cocaine while enrolled in methadone maintenance treatment. In view of these deficiencies, current Federal policy emphasizes that entry into methadone maintenance should be voluntary and that drug-free treatment should be offered as an alternative.

Therapeutic Communities

Therapeutic communities are residential treatment programs which attempt to deal with the psychological causes of addiction by changing the addict's character and personality. As mentioned earlier, the first therapeutic community for drug addicts was Synanon, founded in 1958. The techniques used were modeled after those of Alcoholics Anonymous, which involved repeated confessions, group interaction, and mutual support among the members. During the late 1950's and early 1960's, the concept of group therapy was growing in popularity throughout the country, and as therapeutic communities developed they adopted it as a major technique. The growth of therapeutic communities also paralleled the growth of communes, and some of the cooperative spirit of the communes was incorporated into the therapeutic communities. The idea of a group of people living and working together for their mutual benefit was, and still is, a basic tenet of the therapeutic community.

Although therapeutic communities are often managed by former addicts, and do not usually have mental health professionals on their staffs, the treatment method is based on two techniques of group psychotherapy. The first technique is confrontation, or encounter group therapy, in which the addict is forced to confess and acknowledge his weakness and immaturity. The second technique is "milieu therapy", in which the addict lives and works within a hierarchial social structure and may progress upward in status as he demonstrates increased responsibility and self-discipline. The principles of behavior modification, or conditioning, are constantly applied within the community in the form of reinforcement of good behavior and punishment of bad behavior. The time period for treatment varies from one therapeutic community to another. Synanon is a permanent community where residents may remain for life. Most therapeutic communities require members to stay 1 or 2 years. The programs also vary in selectivity. The older programs screened applicants rigorously, accepting only the most highly motivated individuals. The older programs also continue to be completely drug-free, whereas some of the newer programs use methadone maintenance or both methadone and drug-free therapy.

The problem with therapeutic communities as a treatment method is that they appear to be suitable for very few people. In fact, about 75 percent of those who enter them

drop out within the first month. Members who remain in the communities and seem to respond to the treatment regimen are largely white and from middle-class backgrounds. Some critics feel that the treatment of residents in a demeaning or punitive way, which is characteristic of many communities, goes against the principles of supportive psychotherapy. Because they are residential, therapeutic communities are more expensive to operate than drug-free outpatient programs, even though many are operated entirely by members. In terms of results, however, therapeutic communities do not appear to be more effective than other drug-free methods of treatment.

Drug-Free Outpatient Treatment

The treatment method which offers drug-free services on an entirely outpatient basis is referred to as either drug-free outpatient, ambulatory drug-free, or outpatient abstinence treatment. There are many differences among programs as to the scope or level of treatment they provide, but they usually include some or all of the following services: group or individual psychotherapy, vocational and social counseling, family counseling, vocational training, education, and community outreach. Programs also differ in the degree of patient involvement in treatment. Some programs are social or "rap" centers where patients drop in occasionally. Others are free clinics providing a wide range of health services. Some programs provide structured methadone detoxification and monitor patient drug use by urine analysis throughout treatment. Little evaluation has been done on this method of treatment since program records often omit data on patients who drop out of treatment early. Most experts believe that these programs do help some people but that the attrition rates are very high. It appears that drug-free outpatient treatment may be more effective with youths who are experimenting with drugs than it is with hard-core addicts.

Multi-Modality Treatment

In recent years some treatment programs have adopted a multi-modality approach by providing more than one method of treatment. This approach has the advantage of offering the patient a choice among alternative treatment regimens. Some patients respond better to a particular method of treatment than to others, and in a multi-modality program patients may be transferred easily from one type of treatment to another. This approach allows for more choice by patients. The larger multi-modality programs may include methadone maintenance, detoxification services, in-patient and outpatient drug-free treatment, and a therapeutic community. The Federal Government today strongly supports the community-based, multi-modality approach to drug dependence treatment.

Treatment for Nonopiate Drug Dependence

At the present time, there are no specialized methods for treating dependence on drugs other than opiates or alcohol. There is no chemotherapy, such as methadone maintenance, for treating abuse of the nonopiate drugs which include amphetamines,

barbiturates, and hallucinogens. These drugs are often referred to as "soft drugs" as opposed to "hard drugs" (opiates). This term is often misleading in that it implies that these drugs are less harmful. In fact, they are often equally as addictive as hard drugs and in some cases more life-threatening. For example, abrupt withdrawal from barbiturates is much more life-threatening than withdrawal from opiates, and for that reason withdrawal from barbiturates requires hospitalization. Simultaneous use of more than one drug sometimes produces serious adverse reactions, including accidental (or intended) overdose. Individuals who abuse two or more drugs, either simultaneously or alternately, are often referred to as polydrug abusers.

Emergency treatment, usually called crisis intervention, is sometimes required for acute adverse reactions resulting from nonopiate drug use. For example, adverse effects of amphetamines and hallucinogens sometimes result in paranoid or violent behavior. Hospital emergency rooms can provide treatment in such emergencies, as well as in overdose cases. However, during the late 1960's when soft drug use was spreading rapidly, many young drug users were reluctant to go to hospitals, fearing trouble with the authorities or the hospital environment itself. As a result, free clinics were set up in many cities to provide an alternative to emergency room treatment. Since 1967 when the Haight-Ashbury Free Clinic opened in San Francisco, more than 250 free clinics have been established across the country. Staffed by doctors, psychologists and others on a volunteer basis, these clinics provide a variety of general medical and social services in addition to treatment of drug abuse emergencies. For those experiencing adverse psychological reactions to drugs, these centers provide a calm, supportive environment and reassurance, or "talking down," by an experienced staff member. In addition, many crisis intervention programs operate telephone hotline services which provide information, referrals, and counseling on request.

Most crisis clinics have very little followup on patients, since they are primarily concerned with immediate problems. Many of the patients treated are young people experimenting with drugs rather than chronic, heavy users. It is generally believed that crisis centers have little lasting impact on those who are compulsive drug users. In recent years some centers have begun to offer long-term psychotherapy, as well as emergency services, in an attempt to alleviate underlying psychological problems associated with chronic drug use. Some of the larger programs now serve as community mental health centers, providing counseling and therapy for a broader range of social and psychological problems.

Other Treatment Approaches

Over the past decade a considerable amount of research effort has been focused on a class of drugs known as narcotic antagonists. These drugs counteract the effects of opiate drugs in the body, including the euphoria, or "high," but, unlike methadone, they do not cause physical dependence. This ability to reverse the effects of opiates has made them useful in treating narcotic overdoses. Research is being

conducted on the use of narcotic antagonists in helping addicts to remain abstinent after withdrawal. One problem is that some antagonists have unpleasant or possibly harmful side effects. Another problem is that all of them are relatively short-acting, and must be administered daily. For these reasons, participation in a treatment program using antagonists requires a high degree of motivation. Scientists are attempting to develop a longer-acting antagonist which would be effective for several days or weeks. It is possible that such an antagonist could be very useful in helping the addict who has been rehabilitated while on methadone and is motivated to be detoxified and remain drug-free.

Because no one method of treatment has proved to be the answer to the drug abuse problem, research and experimentation are being conducted on a wide variety of potential treatment methods. Some researchers are working with behavioral techniques such as aversive therapy, or negative conditioning, in which electric shocks or nausea-producing substances are administered simultaneously with narcotics. Others are using bio-feedback techniques to attempt to train people to control internal states and body processes. Transcendental meditation has been investigated as a possible method of reducing soft drug use, particularly among college students. Much attention is currently directed toward developing alternatives to drug abuse, which may include any meaningful activity or pursuits in which young people can become involved instead of resorting to drugs.

Summary

The wide diversity of treatment methods reflects the present lack of precise knowledge as to the nature of drug addiction and abuse. Uncertainty still exists regarding the causes, whether or not it is an "illness," and the degree to which the condition is physical or psychological. Policymakers continue to debate these issues while research is attempting to increase our knowledge of this complex social problem. Meanwhile, even though treatment programs across the country are not "curing" some patients of the condition of drug dependence, nonetheless, for the majority, they are providing support and a marked degree of social rehabilitation for better functioning and a better life.

Issues and Opinions

We need flexible programs in which patients can move at their own optimal rates from methadone to total abstinence--and freely back to methadone if relapse occurs. A program that gains the confidence of the addicts can become a permanent community resource, to which they can turn again when in need of help.

--Avram Goldstein (1972)

It is too early to expect or provide a definitive assessment of the role of methadone in the rehabilitation of narcotic addicts...Our current opinion is that programs which offer a wide range of services, and which use methadone in support of their operation, can be useful for some 40 to 60 percent of addicts who volunteer for treatment, and can aid them in achieving a socially desirable change in life style.

--Daniel X. Freedman and
Edward C. Senay (1973)

Treatment is not the end of the road. It is the beginning of a process of turning an individual around from a self-destructive existence to a productive, self-sufficient life. Treatment programs must help the ex-addict find and adopt alternatives to his street-hustling life. A range of rehabilitation options must be available to each client. Some individuals may need basic schooling, others vocational counseling or skills training. Some may need transitional supported work while others simply need a job. Goal oriented, realistic, positive counseling should reveal what a client needs. Ideally, we would like to see the range of options available to all individuals.

--Robert L. Dupont (1974)

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